## **RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

ENTERED

## per'd PCT/PTO



PCT

RAW SEQUENCE LISTING DATE: 01/28/2005 PATENT APPLICATION: US/10/521,319 TIME: 11:41:28

Input Set : A:\PG4871 SEQUENCE LISTING.txt
Output Set: N:\CRF4\01282005\J521319.raw

```
5 <110> APPLICANT: Glaxo Group Limited
9 <120> TITLE OF INVENTION: Animal Models
13 <130> FILE REFERENCE: PG4871
```

C--> 17 <140> CURRENT APPLICATION NUMBER: US/10/521,319

C--> 19 <141> CURRENT FILING DATE: 2005-01-14

23 <160> NUMBER OF SEQ ID NOS: 20

27 <170> SOFTWARE: PatentIn version 3.1

31 <210> SEQ ID NO: 1 33 <211> LENGTH: 2984 35 <212> TYPE: DNA

37 <213> ORGANISM: Homo sapiens

41 <400> SEQUENCE: 1 60 42 gegeeceagt egacgetgag etectetget acteagagtt geaaceteag cetegetatg 120 44 geteceagea geceeggee egegetgeee geacteetgg teetgetegg ggetetgtte 180 46 ccaqqacctq qcaatqccca gacatctgtq tccccctcaa aagtcatcct gccccgggga 240 48 ggctccgtgc tggtgacatg cagcacctcc tgtgaccagc ccaagttgtt gggcatagag 50 accccgttgc ctaaaaagga gttgctcctg cctgggaaca accggaaggt gtatgaactg 300 52 agcaatgtgc aagaagatag ccaaccaatg tgctattcaa actgccctga tgggcagtca 360 420 54 acagetaaaa cetteeteae egtgtaetgg acteeagaae gggtggaaet ggeaeceete 480 56 ccctcttggc agccagtggg caagaacctt accctacgct gccaggtgga gggtggggca 540 58 ccccgggcca acctcaccgt ggtgctgctc cgtggggaga aggagctgaa acgggagcca 600 60 gctgtggggg agcccgctga ggtcacgacc acggtgctgg tgaggagaga tcaccatgga 62 gecaatttet egtgeegeae tgaaetggae etgeggeece aagggetgga getgtttgag 660 64 aacacetegg ceceetaeca getecagaee tttgteetge cagegaetee cecacaaett 720 66 gtcagccccc gggtcctaga ggtggacacg caggggaccg tggtctgttc cctggacggg 780 840 68 ctgttcccag tctcggaggc ccaggtccac ctggcactgg gggaccagag gttgaacccc 900 70 acagtcacct atggcaacga ctccttctcg gccaaggcct cagtcagtgt gaccgcagag 960 72 gacgaggca cccagcggct gacgtgtgca gtaatactgg ggaaccagag ccaggagaca 1020 74 ctgcagacag tgaccatcta cagctttccg gcgcccaacg tgattctgac gaagccagag 1080 76 gtctcagaag ggaccgaggt gacagtgaag tgtgaggccc accctagagc caaggtgacg 1140 78 ctgaatgggg ttccagccca gccactgggc ccgagggccc agctcctgct gaaggccacc 80 ccagaggaca acgggcgcag cttctcctgc tctgcaaccc tggaggtggc cggccagctt 1200 1260 82 atacacaaga accagacccg ggagcttcgt gtcctgtatg gcccccgact ggacgagagg 84 gattgtccgg gaaactggac gtggccagaa aattcccagc agactccaat gtgccaggct 1320 1380 86 tgggggaacc cattgcccga gctcaagtgt ctaaaggatg gcactttccc actgcccatc 1440 88 ggggaatcag tgactgtcac tcgagatctt gagggcacct acctctgtcg ggccaggagc 90 actcaagggg aggtcacccg caaggtgacc gtgaatgtgc tctccccccg gtatgagatt 1500 92 gtcatcatca ctgtggtagc agccgcagtc ataatgggca ctgcaggcct cagcacgtac 1560 94 ctctataacc gccagcggaa gatcaagaaa tacagactac aacaggccca aaaagggacc 1620 96 cccatgaaac cgaacacaca agccacgcct ccctgaacct atcccgggac agggcctctt 1680 98 cctcggcctt cccatattgg tggcagtggt gccacactga acagagtgga agacatatgc 1740 100 catgcagcta cacctaccgg ccctgggacg ccggaggaca gggcattgtc ctcagtcaga 1800

102 tacaacagca tttggggcca tggtacctgc acacctaaaa cactaggcca cgcatctgat

1860

Input Set : A:\PG4871 SEQUENCE LISTING.txt
Output Set: N:\CRF4\01282005\J521319.raw

104	ctgtagtcac atgactaagc caagagg	gaag	gagcaag	jact	caagacatga	ttgat	ggatg	1920			
106	ttaaagtcta gcctgatgag aggggaa	agtg	gtggggg	jaga	catagcccca	. ccatg	aggac	1980			
108	atacaactgg gaaatactga aacttg	ctgc	ctattgg	ggta	tgctgaggcd	ccaca	gactt	2040			
110	acagaagaag tggccctcca tagacat	gtg	tagcato	caaa	acacaaaggo	ccaca	cttcc	2100			
112	tgacggatgc cagcttgggc actgctg	gtct	actgaco	cca	acccttgate	atatg	tattt	2160			
114	attcatttgt tattttacca gctatt	tatt	gagtgto	ettt	tatgtaggct	aaatg	aacat	2220			
116	aggtctctgg cctcacggag ctccca	gtcc	taatcac	catt	caaggtcacc	aggta	cagtt	2280			
118	gtacaggttg tacactgcag gagagtg	gcct	ggcaaaa	aga	tcaaatgggg	ctggg	acttc	2340			
120	tcattggcca acctgccttt ccccaga	aagg	agtgatt	ttt	ctatcggcac	aaaag	cacta	2400			
122	tatggactgg taatggttac aggttca	agag	attacco	agt	gaggccttat	tcctc	ccttc	2460			
124	cccccaaaac tgacaccttt gttagc	cacc	tccccac	cca	catacatttc	tgcca	gtgtt	2520			
126	cacaatgaca ctcagcggtc atgtct	ggac	atgagto	gccc	agggaatatg	cccaa	gctat	2580			
128	gccttgtcct cttgtcctgt ttgcatt	tca	ctgggag	gctt	gcactatgca	gctcc	agttt	2640			
	cctgcagtga tcagggtcct gcaagca							2700			
132	ctcccagctt tggaagcctc atccgc	gtgt	gtgtgtg	gtgt	gtatgtgtag	acaag	ctctc	2760			
134	gctctgtcac ccaggctgga gtgcag	ggt	gcaatca	atgg	ttcactgcag	tcttg	acctt	2820			
136	ttgggctcaa gtgatcctcc cacctca	agcc	tcctgag	gtag	ctgggaccat	aggct	cacaa	2880			
138	caccacacct ggcaaatttg attttt	ttt	tttttcc	caga	gacggggtct	cgcaa	cattg	2940			
140	cccagacttc ctttgtgtta gttaata	aaag	ctttctc	caac	tgcc			2984			
143	<210> SEQ ID NO: 2										
145	<211> LENGTH: 189										
	<212> TYPE: DNA										
149	<213> ORGANISM: Homo sapiens										
	<400> SEQUENCE: 2										
154	ggaggeteeg tgetggtgae atgeage	cacc	tcctgtg	gacc	agcccaagtt	gttgg	gcata	60			
	gagaccccgt tgcctaaaaa ggagtto							120			
158	ctgagcaatg tgcaagaaga tagccaa	acca	atgtgct	att	caaactgccc	tgatg	ggcag	180			
160	tcaacagct							189			
	<210> SEQ ID NO: 3										
	<211> LENGTH: 198										
	<212> TYPE: DNA										
	<213> ORGANISM: Homo sapiens										
	<400> SEQUENCE: 3										
	ggcaagaacc ttaccctacg ctgccag							60 120			
	6 gtggtgctgc tccgtgggga gaaggagctg aaacgggagc cagctgtggg ggagcccgct										
	8 gaggtcacga ccacggtgct ggtgaggaga gatcaccatg gagccaattt ctcgtgccgc 180										
	30 actgaactgg acctgcgg 198										
	<210> SEQ ID NO: 4										
	<211> LENGTH: 532										
	<212> TYPE: PRT										
	<213> ORGANISM: Homo sapiens										
	<400> SEQUENCE: 4		_		_						
	Met Ala Pro Ser Ser Pro Arg I	Pro A		Pro	Ala Leu Le		Leu				
196		_	10			15					
	Leu Gly Ala Leu Phe Pro Gly I		_	Ala			ser				
200			5		30		_				
	Pro Ser Lys Val Ile Leu Pro A	_	ly Gly	Ser		I Thr	Cys				
204		10			45	_					
207	Ser Thr Ser Cys Asp Gln Pro I	ys I	eu Leu	GLY	Ile Glu Th	r Pro	Leu				

Input Set : A:\PG4871 SEQUENCE LISTING.txt
Output Set: N:\CRF4\01282005\J521319.raw

208		50					55					60				
211	Pro	Lys	Lys	Glu	Leu	Leu	Leu	Pro	Gly	Asn	Asn	Arg	Lys	Val	Tyr	Glu
212		_	-			70			_		75		_		_	80
215	Leu	Ser	Asn	Val	Gln	$\operatorname{Glu}$	Asp	Ser	Gln	Pro	Met	Cys	Tyr	Ser	Asn	Cys
216					85					90					95	
219	Pro	Asp	Gly	Gln	Ser	Thr	Ala	Lys	Thr	Phe	Leu	Thr	Val	Tyr	Trp	Thr
220		_		100	•				105					110		
223	Pro	Glu	Arg	Val	Glu	Leu	Ala	Pro	Leu	Pro	Ser	Trp	Gln	Pro	Val	Gly
224			115					120					125			
227	Lys	Asn	Leu	Thr	Leu	Arg	Cys	Gln	Val	Glu	Gly	Gly	Ala	Pro	Arg	Ala
228		130					135					140				
231	Asn	Leu	Thr	Val	Val	Leu	Leu	Arg	Gly	Glu	Lys	Glu	Leu	Lys	Arg	Glu
232	145					150					155					160
235	Pro	Ala	Val	Gly	Glu	Pro	Ala	Glu	Val	Thr	Thr	Thr	Val	Leu	Val	Arg
236					165					170					175	
239	Arg	Asp	His	His	Gly	Ala	Asn	Phe		Cys	Arg	Thr	Glu	Leu	Asp	Leu
240				180					185					190		
	Arg	Pro		Gly	Leu	Glu	Leu		Glu	Asn	Thr	Ser		Pro	Tyr	Gln
244		_	195		_			200	_			_	205	_		
	Leu		Thr	Phe	Val	Leu		Ala	Thr	Pro	Pro		Leu	Val	Ser	Pro
248		210	_		<b>_</b>	_	215					220	_	_	_	_
	_	Val	Leu	Glu	Val	_	Thr	Gln	Gly	Thr		Val	Cys	Ser	Leu	
	225	_	_,	_		230	~ 7		~3		235	_		_	~1	240
	GLY	Leu	Phe	Pro	Val	Ser	GIu	Ala	Gin		His	ьeu	Ala	Leu	_	Asp
256	<b>~</b> 1	3	<b>.</b>	3	245	m\	*** 7	m1	m	250	7	3	0	nh -	255	77-
	GIII	Arg	ьeu		Pro	Thr	vai	THE		GIY	ASII	Asp	ser	270	ser	Ald
260	Tvea	. ה ה	Cor	260	Ser	170]	mb~	7.7.	265	Λαn	Clu	C111	Thr		λνα	Lou
264	пуs	AIa	275	vai	261	vai	1111	280	Giu	дал	GIU	GIY	285	GIII	Arg	шец
	Thr	Cve		Val	Ile	T. <b>-</b> 11	Gl v		Gln	Ser	Gln	Glu		T.e11	Gln	Thr
268	1111	290	AΙα	Val	110	шси	295	71011	01.11	DCI	0111	300	****	пси	0111	****
	Va1		Ile	Tvr	Ser	Phe		Ala	Pro	Asn	Val		Leu	Thr	Lvs	Pro
	305			-1-		310					315					320
		Val	Ser	Glu	Gly		Glu	Val	Thr	Val		Cys	Glu	Ala	His	Pro
276					325					330	•	•			335	
	Arq	Ala	Lys	Val	Thr	Leu	Asn	Gly	Val	Pro	Ala	Gln	Pro	Leu	Gly	Pro
280	-		•	340				•	345					350		
283	Arg	Ala	Gln	Leu	Leu	Leu	Lys	Ala	Thr	Pro	Glu	Asp	Asn	Gly	Arg	Ser
284			355				-	360				_	365	_	_	
287	Phe	Ser	Cys	Ser	Ala	Thr	Leu	Glu	Val	Ala	Gly	Gln	Leu	Ile	His	Lys
288		370	_				375					380				
291	Asn	Gln	Thr	Arg	Glu	Leu	Arg	Val	Leu	Tyr	Gly	Pro	Arg	Leu	Asp	Glu
292	385					390					395					400
295	Arg	Asp	Cys	Pro	Gly	Asn	Trp	Thr	Trp	${\tt Pro}$	Glu	Asn	Ser	Gln	Gln	Thr
296					405					410					415	
299	Pro	Met	Cys	Gln	Ala	${\tt Trp}$	Gly	Asn	${\tt Pro}$	Leu	Pro	Glu	Leu	Lys	Cys	Leu
300				420					425					430		
303	Lys	Asp	Gly	Thr	Phe	Pro	Leu	Pro	Ile	Gly	Glu	Ser	Val	Thr	Val	Thr
304			435					440					445			

Input Set : A:\PG4871 SEQUENCE LISTING.txt
Output Set: N:\CRF4\01282005\J521319.raw

307 Arg Asp Leu Glu Gly Thr Tyr Leu Cys Arg Ala Arg Ser Thr Gln Gly 308 450 455 311 Glu Val Thr Arq Glu Val Thr Val Asn Val Leu Ser Pro Arq Tyr Glu 475 312 465 470 315 Ile Val Ile Ile Thr Val Val Ala Ala Val Ile Met Gly Thr Ala 485 319 Gly Leu Ser Thr Tyr Leu Tyr Asn Arg Gln Arg Lys Ile Lys Lys Tyr 320 500 505 323 Arg Leu Gln Gln Ala Gln Lys Gly Thr Pro Met Lys Pro Asn Thr Gln 324 515 520 327 Ala Thr Pro Pro 328 530 331 <210> SEQ ID NO: 5 333 <211> LENGTH: 63 335 <212> TYPE: PRT 337 <213> ORGANISM: Homo sapiens 341 <400> SEQUENCE: 5 343 Gly Gly Ser Val Leu Val Thr Cys Ser Thr Ser Cys Asp Gln Pro Lys 344 1 347 Leu Leu Gly Ile Glu Thr Pro Leu Pro Lys Lys Glu Leu Leu Pro 25 351 Gly Asn Asn Arg Lys Val Tyr Glu Leu Ser Asn Val Gln Glu Asp Ser 355 Gln Pro Met Cys Tyr Ser Asn Cys Pro Asp Gly Gln Ser Thr Ala 356 50 55 359 <210> SEQ ID NO: 6 361 <211> LENGTH: 66 363 <212> TYPE: PRT 365 <213> ORGANISM: Homo sapiens 369 <400> SEQUENCE: 6 371 Gly Lys Asn Leu Thr Leu Arg Cys Gln Val Glu Gly Gly Ala Pro Arg 372 1 5 375 Ala Asn Leu Thr Val Val Leu Leu Arg Gly Glu Lys Glu Leu Lys Arg 25 379 Glu Pro Ala Val Gly Glu Pro Ala Glu Val Thr Thr Val Leu Val 383 Arg Arg Asp His His Gly Ala Asn Phe Ser Cys Arg Thr Glu Leu Asp 50 55 387 Leu Arq 388 65 391 <210> SEQ ID NO: 7 393 <211> LENGTH: 1614 395 <212> TYPE: DNA 397 <213> ORGANISM: Mus sp. 401 <400> SEQUENCE: 7 402 atggetteaa eeegtgeeaa geeeaegeta eetetgetee tggeeetggt eaeegttgtg 404 atccctgggc ctggtgatgc tcaggtatcc atccatccca gagaagcctt cctgccccag 120 406 ggtgggtccg tgcaggtgaa ctgttcttcc tcatgcaagg aggacctcag cctgggcttg 180 408 gagactcagt ggctgaaaga tgagctcgag agtggaccca actggaagct gtttgagctg 240

Input Set : A:\PG4871 SEQUENCE LISTING.txt
Output Set: N:\CRF4\01282005\J521319.raw

	agcgagatcg gggaggaca					300
	tccgcttccg ctaccatca					360
	ccagcctggc agcaagtag					420
	ccgcggaccc agctctcag					480
	gtgggtgggc accccaagg					540
420	gaccacggag ccaatttct	c atgccgcaca	gaactggatc	tcaggccgca	agggctggca	600
422	ttgttctcta atgtctcc	ga ggccaggagc	ctccggactt	tcgatcttcc	agctaccatc	660
424	ccaaagctcg acacccctg	ga cctcctggag	gtgggcaccc	agcagaagtt	gttttgctcc	720
426	ctggaaggcc tgtttcctg	gc ctctgaagct	cggatatacc	tggagctggg	aggccagatg	780
428	ccgacccagg agagcacaa	a cagcagtgac	tctgtgtcag	ccactgcctt	ggtagaggtg	840
430	actgaggagt tcgacagaa	ac cctgccgctg	cgctgcgttt	tggagctagc	ggaccagatc	900
432	ctggagacgc agaggacct	t aacagtctac	aacttttcag	ctccggtcct	gaccctgagc	960
	cagctggagg tctcggaag					1020
	aaggtggttc ttctgagcg					1080
	ctgaatgcca gctcggagg					1140
	gcgggaaagt tcctgttta					1200
	ctggacgaga cggactgct					1260
	aaatgccagg cctggggg					1320
	gccctgctgc ccatcggg					1380
	tgccatgcct ttagctccc					1440
	cactctcaaa ataactgga					1500
	ctcgtgatgg cagcctctt					1560
	cagaaggctc aggaggagg					1614
	<210> SEQ ID NO: 8	,c cacaaaaccc	uugggucuug		0034	
	<211> LENGTH: 204					
	<212> TYPE: DNA					
	<213> ORGANISM: Mus	en				
	<400> SEQUENCE: 8	Sp.				
	ggcacccagc agaagttgt	t ttactcccta	gaaggeetgt	tteetaeete	tgaagetegg	60
	atatacctgg agctgggag					120
	gtgtcagcca ctgccttgg					180
			gaggageeeg	acagaacccc	geegeege	204
	tgcgttttgg agctagcgg	ja ccay				204
	<210> SEQ ID NO: 9 <211> LENGTH: 162					
	<211> HENGIH. 102 <212> TYPE: DNA					
	<213> ORGANISM: Mus	an				
		sp.				
	<400> SEQUENCE: 9				tattatasaa	60
	gggagccaag taactgtga					
	ggcgtcgagc ctaggccac				cagereggag	120
	gatcacaaac gaagcttct	t tigetetgee	getetggagg	сg		162
	<210> SEQ ID NO: 10					
	<211> LENGTH: 159					
	<212> TYPE: DNA					
	<213> ORGANISM: Mus	sp.				
	<400> SEQUENCE: 10					
	gaggggtctc agcagacto					60
	tgcagacgga aggcagatg			tggtgaagtc	tgtcaaacag	120
	gagatgaatg gtacatacg	st gtgccatgcc	tttagctcc			159
	<210> SEQ ID NO: 11					

VERIFICATION SUMMARYDATE: 01/28/2005PATENT APPLICATION: US/10/521,319TIME: 11:41:29

Input Set : A:\PG4871 SEQUENCE LISTING.txt
Output Set: N:\CRF4\01282005\J521319.raw

L:17 M:270 C: Current Application Number differs, Replaced Current Application Number

L:19 M:271 C: Current Filing Date differs, Replaced Current Filing Date